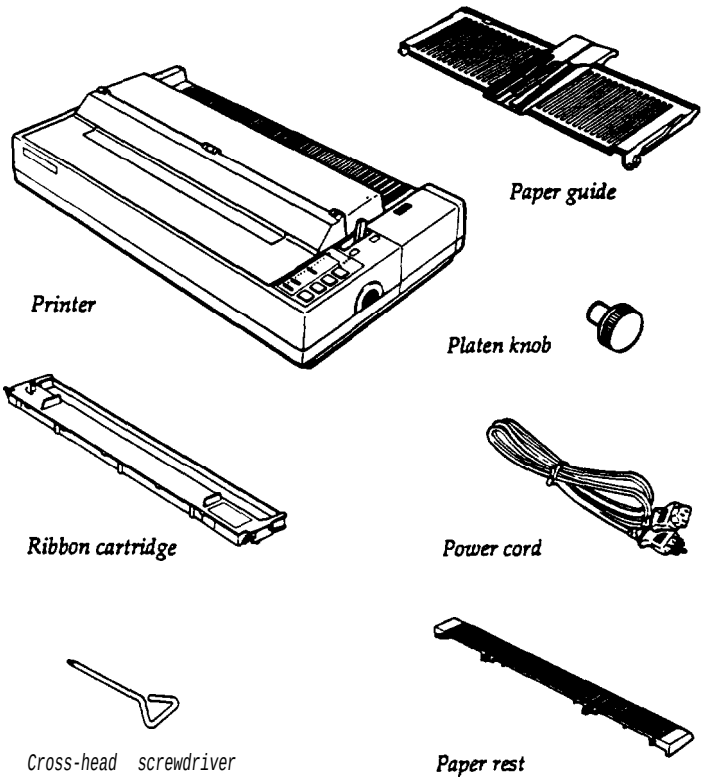


Printer Specifications

Main Board Type: C027-X

Print method: 24-pin impact dot matrix

Print speed:

Quality	Characters per inch	Characters/second/line
High-speed draft	10	300
Normal draft	10	246
	12	295
Letter Quality	10	82
	12	98

Printing direction: Bidirectional logic-seeking for text and graphics.
(Unidirectional can be selected with a DIP switch or by using the proper software command.)

Line spacing: 1/6 inch or programmable in increments of 1/360 inch

Paper feed speed: Single sheet: 3.0 inches per sec (60 ms/line)
Continuous: 2.7 inches per sec (65 ms/line)

Printable columns:

Character spacing	Maximum printed characters LQ-850	LQ-1050
10 cpi	80	136
10 cpi condensed	137	233
12 cpi	96	164
12 cpi condensed	160	272

Buffer: 6KB or 0KB (panel button selectable)

Character fonts:

Family Number	Font Name	Sizes Available (Characters Per Inch)
0	Roman	10, 12, 15, proportional
1	Sans Serif	10, 12, 15, proportional
2	Courier	10, 12, 15
3	Prestige	10, 12, 15
4	Script	10, 12, 15
5	OCR-B	10
5	OCR-A	10
7	Orator	10
8	Orator-S	10
	Draft	10, 12, 15

OCR-A and Orator-S must be selected using escape sequences.

Characters: 96 standard ASCII character set (including italic characters)
14 international character sets
1 Legal character set
Epson **Extended** Graphics character set
5 graphics character sets

Paper weight:

Single sheet	14 lb to 24 lb
Continuous	14 lb to 22 lb
Multi-part forms	12 lb to 15 lb per sheet. Maximum number sheets = 4
Envelope	12 lb to 24 lb

Paper thickness:

Single Sheet	0.0025 to 0.0055 inch (0.065 to 0.14 mm)
Continuous	0.0025 to 0.012 inch (0.065 to 0.32 mm)
Envelope	0.0063 to 0.0197 inch (0.16 to 0.52 mm)
Label	maximum 0.0075 inch (0.19 mm)

Number of copies: One original plus up to 3 copies (at normal temperature)
One original plus up to 2 copies (all temperature ranges)
Total thickness must not exceed 0.012 inch (0.32 mm)

Mechanical

Ribbon: Black ribbon cartridge #7753/#7754:

Life expectancy (in Letter Quality characters, at 48 dots/character)
2 million characters

Film ribbon cartridge #7768/#7770:

Life expectancy (in Letter Quality characters)

#7768: 0.2 million characters
#7770: 0.3 million characters

MCBF: For all components excluding print head: 5,000,000 lines

MTBF: LQ-850: 4000 power-on hours (at 25% duty)

LQ-1050: 6000 power-on hours (at 25% duty)

Print head life: 200 million strokes fabric ribbon
100 million strokes film ribbon

Dimensions and weight:

	LQ-850 (80)	LQ-1050 (136)
Height	5.6 inches (142 mm)	5.6 inches (142 mm)
Width	17.0 inches (430 mm)	23.8 inches (605 mm)
Depth	14.2 inches (360 mm)	14.2 inches (360 mm)
Weight	approx. 19.8 lb (9 kg)	approx. 26.4 lb (12 kg)

Electrical

Voltage: 120 VAC ± 10%

Power consumption: (self test printing: draft mode)
LQ-850: 55W 240W (maximum)
LQ-1050: 60 W

Frequency: 49.5-60.5 Hz

Insulation resistance: 10M ohms between AC power line and chassis

Dielectric strength (between **AC** *line and chassis):* Can withstand 1.00 kV rms applied for one minute or 1.20 kV rms applied for one second

Environmental

Temperature: Operation: 41°F to 95°F (5°C to 35°C)
Storage: -22°F to 150°F (-30°C to 65°C)

Humidity *(without condensation):* Operation: 10% to 80%
Storage: 5% to 85%

Operation angle: Less than 15° (without cut sheet feeder)
0° (with cut sheet feeder)

Shock: Operation: Up to 1G within 1 ms
Storage: Up to 2G within 1 ms

Vibration: *Operation:* Up to 0.25 G at up to **55 Hz**
Storage: Up to 0.50 G at up to 55 Hz

Paper Handling

Paper feeding methods: Friction

Built-in push feed tractor with paper tension unit

Pull tractor (optional)

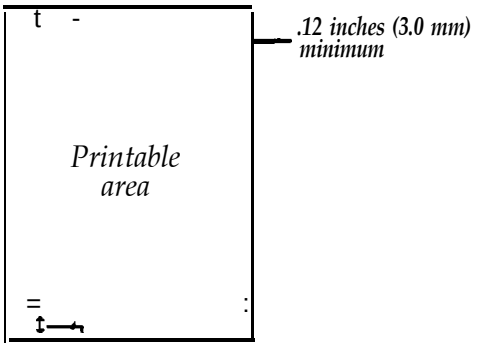
Single-bin or double-bin cut sheet feeder (optional)

Paper width and length:

Paper	LQ-850	LQ-1050
Single sheet		
width	7.2 to 10.1 inches (182 to 257 mm)	7.2 to 14.3 inches (182 to 364 mm)
length	7.2 to 14.3 inches (182 to 364 mm)	7.2 to 14.3 inches (182 to 364 mm)
Continuous paper		
width	4.0 to 10.0 inches (101 to 254 mm)	4.0 to 16.0 inches (101 to 406 mm)
Envelopes	No.6 6.54 x 3.62 inches (166 x 92 mm) No.10 9.45 x 4.09 inches (240 x 104 mm)	
Labels	2.5 x 0.94 inch (63.5 x 23.8 mm) minimurn	

Printable area: Single sheet

0.33 inch (8.5 mm) minimum



0.53 inch (13.5 mm) minimum

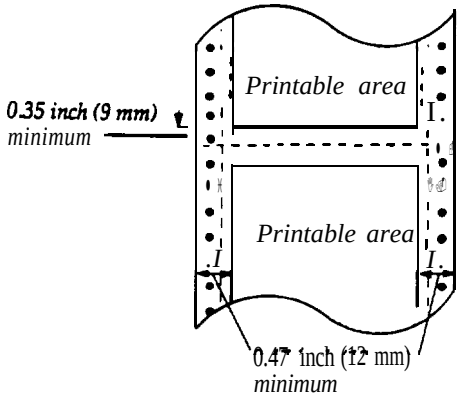
Note; For the LQ-850, printing on paper from 9 to 10.1 inches wide increases the minimum right and left margins to 0.53 inches.

Notes:

- The use of 24 lb paper is only available at normal temperature.
- Printing past the edge of envelopes, multi-part forms labels, or paper that is thicker than normal can damage the print head.
- Labels with a pressure sensitive covering, either glued or tacked onto the backing sheet, can be printed under the conditions listed below. The total thickness may not exceed 0.0118 inch (0.3 mm).

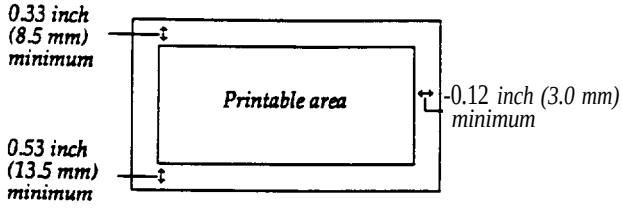
  -The temperature range is between 41°F and 95°F (5 to 35°C).
  -The relative humidity is between 10 and 80 percent.

Continuous paper



Note: The *minimum* for the right and left margins increases to 0.98 inch (25.0 mm) when printing on IO-inch wide paper on the LQ-850 or on 16-inch wide paper on the LQ-1050.

Envelope



Note: Envelope printing is only available at normal operating conditions. Load the envelope with its long side horizontal.

Note: For normal use, set the paper thickness lever to position 2 on the scale.

If you have installed the optional film ribbon cartridge, and you want to use the single sheets or continuous paper, set the paper thickness lever to position 1.

The following table gives you general guidelines for selecting the right paper thickness lever position for the type of paper you are using:

Paper typo	Lever position
Paper (single sheets or continuous paper with film ribbon installed)	1
Thin paper	2 or 1
Paper (single sheets *or* continuous paper with standard ribbon installed)	2
24 lb paper (single sheets)	3
Multi-part forms P-sheet 3-sheet 4-sheet	 3 4 5
Labels	4
Envelopes Air mail Plain Bond (20 lb.) Bond (24 lb.)	 4 or 5 6 6 7

Note: If the lever is set to position 4 or higher the printing speed may be reduced slightly,

Setting the DIP Switches

DIP Switch 1 Settings

SW	Description	ON	OFF	Factory Setting
1-1 1-2 1-3	International character set/ Graphics character set	See Table		ON ON ON
1-4	Character table	Graphics	Italics	OFF
1-5	Print direction for graphics	Unidirectional	Bidirectional	OFF
1-6	High-speed draft	OFF	ON	OFF
1-7	Cut sheet feeder mode	ON	OFF	OFF
1-8	Skip over perforation	ON	OFF	OFF

DIP Switch 2 Settings

SW	Description	ON	OFF	Factory Setting
2-1 2-3	Page length selection	See Table		OFF OFF
2-3 2-4	Interface type/parity	See Table		OFF OFF
2-5 2-6	Baud rate	See Table		OFF OFF
2-7	Short tear-off mode	ON	OFF	OFF
2-8	Auto line feed	ON	OFF	OFF

International character sets

Country	1-1	1-2	1-3	Code Page
U.S.A.	ON	ON	ON	437
France	ON	ON	OFF	850
Germany	ON	OFF	ON	860
U. K.	ON	OFF	OFF	863
Denmark 1	OFF	ON	ON	865
Sweden	OFF	ON	OFF	437
Italy	OFF	OFF	ON	437
Spain 1	OFF	OFF	OFF	437

Note: The ESC R control codes can change the above settings to any country's character 5

International character sets are selectable *only* when DIP switch 1-4 is

Interface/parity selection

Interface type	Parity	2-3	2-4
Parallel		OFF	OFF
Serial	Even	ON	OFF
Serial	Odd	OFF	ON
Serial	None	ON	ON

Baud rate selection

Baud Rate	2-5	2-6
9600 bps	OFF	OFF
19200 bps	ON	OFF
1200 bps	OFF	ON
300 bps	ON	ON

Graphics character sets

Graphics type	SW 1-1	SW 1-2	SW 1-3
United States	ON	ON	ON
Multilingual	ON	ON	OFF
Portugal	ON	OFF	ON
Canada-French	ON	OFF	OFF
Norway	OFF	ON	ON

Graphics character sets are selectable only when the DIP switch 1-4 is on.

Page length selection

Page Length	2-1	2-2
11 inches	OFF	OFF
12 inches	ON	OFF
8.5 inches	OFF	ON
11.7 inches	ON	ON

Selecting Character Sets

Country	ASCII code hex												DIP SW		
	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E	1-1	1-2	1-3
0 U.S.A.	#	$	@	[	\	]	^	`	{	¦	}	~	ON	ON	ON
1 France	#	$	à	°	ç	§	^	`	é	ù	è	¨	ON	ON	OFF
2 Germany	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß	ON	OFF	ON
3 U.K.	£	$	@	[	\	]	^	`	{	¦	}	~	ON	OFF	OFF
4 Denmark I	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~	OFF	ON	ON
5 Sweden	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü	OFF	ON	OFF
6 Italy	#	$	@	°	\	é	^	ù	à	ò	è	ì	OFF	OFF	ON
7 Spain I	₧	$	@	¡	Ñ	¿	^	`	¨	ñ	}	~	OFF	OFF	OFF

Country	ASCII code hex											
	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
8 Japan	#	$	@	[	¥	]	^	`	{	¦	}	~
9 Norway	#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
10 Denmark II	#	$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
11 Spain II	#	$	á	¡	Ñ	¿	é	`	í	ñ	ó	ú
12 Latin America	#	$	á	¡	Ñ	¿	é	ü	í	ñ	ó	ú
13 Korea	#	$	@	[	₩	]	^	`	{	¦	}	~
64 Lagal	#	$	§	°	'	"	¶	`	●	●	†	▬

Once you set the DIP switches for a certain character set, that set remains valid even after you turn off, reset, or initialize the printer. However, software commands override the DIP switches settings until the commands are canceled or the printer is turned off, reset, or initialized.

Application Software

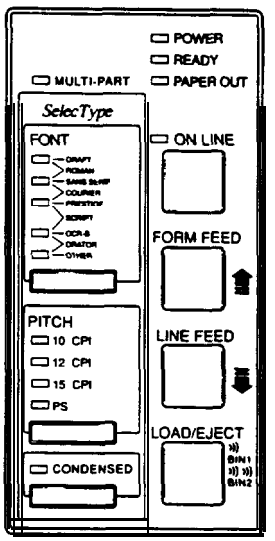
Because the family of Epson printers shares a great many commands, you can use an application program even if it does not list the LQ-850 or LQ-1050 on its printer selection menu. If the printer is not listed, choose one of the following printers. They are listed in order of preference.

LQ-850 (LQ-1050)
LQ-800 (LQ-1000)
LQ-510/LQ-500
LQ-1500

If none of these printers is listed, select the first one available on the following list LQ, EX, FX, LX, RX, MX, Epson printer, Standard printer, Draft printer.

To use all of the features of the printer, however, it is best to use a program with the LQ-850J or LQ-1050 on its menu. If your program does not list the printer, contact the software manufacturer to see if an update is available that supports your model.

The Control Panel



Buttons

ON LINE
This button controls the printer's on line and off line status. Press this button to put the printer on line or take it off line. When the printer is on line. the ON LINE light 6 on and the printer can receive and print data **from the** computer.

FORM FEED
When the printer is off line, press this button to eject a single sheet of paper or to advance continuous paper to the top of the next page.

LINE FEED
When the printer is off line, press this button to advance the paper one line, or hold it down to advance the paper continuously.

LOAD/EJECT
When the printer is off line, press this button to feed paper to the loading position or to eject paper that is already loaded. Paper is ejected forward if the paper release lever is set to the single-sheet position and backward (out of the paper path) if the release lever is set to the continuous paper position
(Also used for buffer options.)

BIN 1/BIN 2
When the printer is on-line, press this button to select either bin 1 or bin 2 of the double-bin cut sheet feeder. The beeper sounds once if you select bin 1 and twice if you select bin 2.

Lights

MULTI-PART (orange)
On when the paper thickness lever is set to position 4 or higher. For regular paper, this light should not be on.) When this light is blinking, the micro-adjustment function can be used.

POWER (green)
On when the POWER switch is on and power is supplied.

READY (green)
On when the printer is ready to accept input data. Flickers during printing.

PAPER OUT (red)
On when the printer is out of paper or when continuous paper is in the standby position.

ON LINE (green)
On when the printer is on line and ready to accept data.

SelecType

FONT
Press this button to select a font. The orange indicator lights show which font you select. See Selecting Typestyles later in this chapter for more information

PITCH
Press this button to select the character spacing. You can choose 10 CPI, 12 CPI, 15 CPI, or PS (proportional spacing). The orange indicator light shows the spacing you select. You cannot select proportional spacing with draft mode. (Draft mode overrides proportional spacing.)

CONDENSED
Press this button to turn the condensed mode on and off. The orange indicator light is on when the printer is in the condensed mode. In the condensed mode, all characters are printed at approximately 40 percent of their normal width You cannot select condensed mode with a pitch of 15 cpi.

Graphics

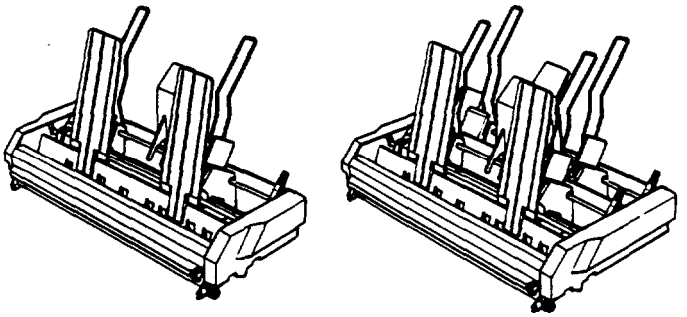
Option	Pins	m	Horiz. density dots/In.
Single-density	8	0	60
Double-density	8	1	120
High-speed double-density	8	2	120
Quadruple-density	8	3	240
CRT I	8	4	80
CRT II	8	4	90
Single-density	24	31	60
Double-density	24	33	120
CRT III	24	38	90
Triple-density	24	39	180
Hex-density	24	40	360

- Adjacent dots cannot be printed in this mode.

The Cut Sheet Feeder

Single-bin and Double-bin Cut Sheet Feeders (#7339G-A/#7340G-A/#7346-A/#7348-A)

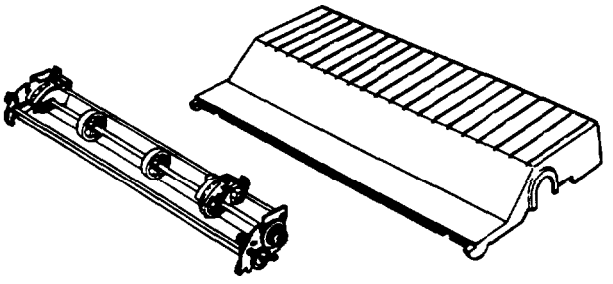
The cut sheet feeders make it possible to handle single-sheet paper and envelopes more easily and more efficiently. Up to 150 sheets of standard bond paper can be automatically fed into the printer without reloading.



The Pull Tractor

Pull Tractor Unit (#7311-A/#7312G-A)

This option improves the performance of continuous paper handling. It is specially useful with continuous multi-part forms.



Commands in Numerical Order

ASCII	Dec.	Hex.	Description	Page
BEL	7	07	**Beeper**	9-12
BS	8	08	Backspace	9-20
HT	9	09	**Tab Horizontally**	9-21
LF	10	0A	LineFeed	9-15
VT	11	0B	Tab **Vertically**	9-17
FF	12	0C	Form Feed	9-13
CR	13	0D	Carriage Return	9-12
SO	14	0E	Select Doublewide Mode (one line)	9-26
SI	15	0F	Select Condensed Mode	9-25
DC1	17	11	Select Printer	9-8
DC2	18	12	Cancel Condensed Mode	9-26
DC3	19	13	Deselect printer	9-9
DC4	20	14	Cancel Doublewide Mode (one line)	9-27
CAN	24	18	Cancel Line	9-12
DEL	127	7F	Delete Character.	9-9
ESC SO	14	0E	Select Double-wide Mode (one line)	9-27
ESC SI	15	0F	Select Condensed Mode	9-26
ESC EM	25	19	Control Cut Sheet Feeder	9-10
ESC SP	32	20	Set Intercharacter Space	9-33
ESC!	33	21	Master select	9-23
ESC#	35	23	Cancel MSB Control.	9-11
ESC$	36	24	Set Absolute Print Position.	9-20
ESC%	37	25	Select User-defined Set	9-37
ESC&	38	26	Define User-defined Characters	9-36
ESC(-	40	28	Select Score	9-31
ESC*	42	2A	Select Graphics Mode	9-39
ESC+	43	2B	Set n/360-inch Line Spacing.	9-15
ESC-	45	2D	Turn Underline Mode on/Off	9-32
ESC/	47	2F	Select Vertical Tab Channel	9-18
ESC0	48	30	Select 1/8-inch Line Spacing	9-15
ESC2	50	32	Select 1/8-inch Line Spacing	9-16
ESC3	51	33	Set n/180-inch Line Spacing	9-16
ESC4	52	34	Select Italic Mode.	9-34
ESC5	53	35	Cancel Italic Mode.	9-35
ESC6	54	36	Enable Printable Characters	9-37
ESC7	55	37	Enable Upper Control Codes	9-37
ESC:	58	3A	Copy ROM to RAM	9-36
ESC<	60	3C	Select Unidirectional Mode (one line)	V-V
ESC =	61	3D	Set MSB to 0	9-11
ESC >	62	3E	Set MSB to 1	9-11
ESC ?	63	3F	Reassign Graphics Mode	9-40
ESC @	64	40	Initialize Printer	9-8
ESC A	65	41	Set n/60-inch Line Spacing.	9-16
ESC B	66	42	Set Vertical Tabs.	9-17
ESC C	67	43	Set Page Length in Lines	9-13
ESC C 0	67	43	Set Page Length in Inches	9-14
ESC D	68	44	Set Horizontal Tabs	9-22
ESC E	69	45	Select Emphasized Mode	9-28
ESC F	70	46	Cancel Emphasized Mode	9-29
ESC G	71	47	Select Double-strike Mode	9-29
ESC H	72	48	Cancel Double-strike Mode	9-29
ESC J	74	4A	Perform n/W-inch Line Feed.	9-17

ASCII	Dec.	Hex.	Description	Page
ESC K	75	4B	Select Singledensity Graphics Mode	9-38
ESCL	76	4C	Select Doubledensity Graphics Mode	9-38
ESCM	77	4D	Select 12 CPI	9-24
ESCN	78	4E	Set Skip Over Perforation	9-14
ESCO	79	4F	Cancel Skip Over Perforation	9-14
ESC P	80	50	Select 10 CPI	9-24
ESC Q	81	51	Set Right Margin	9-19
ESCR	82	52	Select an International character set	9-35
ESC S0	83	53	Select Superscript Mode	9-30
ESC S1	83	53	Select Subscript Mode	9-30
ESCT	84	54	Cancel Superscript/Subscript Mode	9-30
ESCU	85	55	Turn Unidirectional Mode on/Off	9-10
ESCW	87	57	Turn Doublewide Mode on/Off	9-27
ESCY	89	59	Select High-speed Doubledensity Graphics Mode	9-38
ESCZ	90	5A	Select Quadruple-density Graphics Mode	9-39
ESC\	92	5C	Set Relative Print Position	9-21
ESCa	97	61	Select Justification	9-33
ESCb	98	62	Set Vertical Tabs in Channels	9-18
ESCg	103	67	Select 15 CPI	9-24
ESCk	107	6B	Select Typestyle Family	9-23
ESC1	108	6C	set Left Margin	9-19
ESCp	112	70	Turn Proportional **Mode** on/Off	9-25
ESCq	113	71	Select Character Style	9-32
ESCt	116	74	Select Character Table	9-34
ESCw	119	77	Turn Doublehigh Mode on/Off	9-28
ESCx	120	78	Select Letter Quality or Draft	9-22

Installation/Support Tips

Short Tear Off

To activate the short tear-off feature on the printer, first turn DIP switch 2-7 to the on position. To control it through the software, send a form feed command at the end of each page. After sending a form feed, do not send it any more data for a 3-second interval/

Single-Sheet Loading

When loading single sheets, make sure that the paper lever is set to single sheets, not tractor paper. The paper can be loaded manually or via auto load. Before attempting to load in the paper, wait for the platen to lock in place after changing the paper lever.

Setting up the Page Length

The page length has to be adjusted for using single sheets and for using tractor paper. When your software you asks you to set up the number of lines/page, single sheets require a shorter page length than does tractor paper. Set the page length to 61 lines for single sheets (also when using the cut-sheet feeder) and 66 lines for tractor paper.

Software

The type of printer installed on your system must be identified for each software package. This is usually done through a setup menu. If the LQ-850/1050+ is not listed in the software package, any Epson 24-pin driver will be compatible.

DIP Switch Settings

The default settings will usually work for most applications, but they should be checked before using the printer. This will avoid unexpected results.